



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW6305G15731-3G
Job Sheet 172416



01/16

Part No: RBW6305G15731-3G

Job Qty: 3 ea

Part Name: Tail Rotor Drive Quill Seal Installer



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/16/18

Job Tracking No:

Due Date: 4/16/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBW6305G15731-3G REV 1 IPP REV A 18.02.15 NEW ISSUE FK VERIFY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	3 pcs		4/16/18	0.00	0.00	Purchasing		4/18/05/01
110	Packaging	3 pcs		4/16/18	0.00	0.00	Packaging2		4/18/05/01
120	QC	3 pcs		4/16/18	0.00	0.00	QC6		21
130	Packaging	3 pcs		4/16/18	0.00	0.00	Packaging3		MAY 0 3 2018
140	QC21-FG	3 Ea		4/16/18	0.00	0.00	QC21	18/05/04	GA163

Part Op 100 - Issue PO to ARROW TECH MACHINE WORKS P/O: 039084 MANUFACTURE RBW6305G15731-3G AS PER
Descriptions: DWG -Certificate of conformity is required

21
9-89

FEB 22 2018

MAY 0 4 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBW6305G15731-3GP	Tail Rotor Drive Quill Seal Installer	3 (1 ea)	100-Purchasing	5067920

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBW6305G15731-3GP	3	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

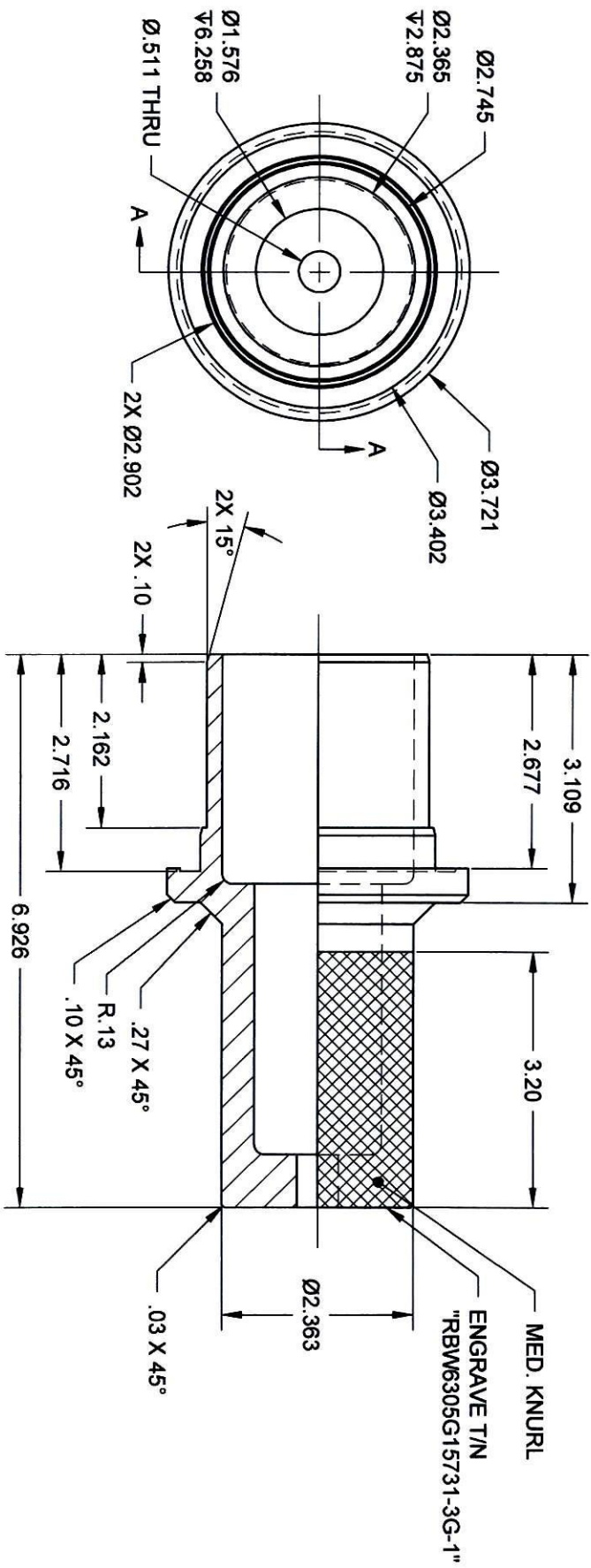


QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Com ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/CS ☐ Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date : _____	Step #: _____	Change No: Operation: Revision: PART NO: Serial No/Batch: S067421 RBW6305G15731-3G Container No: S067421 DART AEROSPACE Job No: 172416 Mfg Date: 05/01/18 RBW6305G15731-3G Tail Rotor Drive Quill Seal Installer Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com						
Description Work Order _____								
Root Cause <table style="width:100%;"> <tr> <td style="width:50%;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:50%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	<table style="width:100%;"> <tr> <td style="width:50%;"> Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width:50%;"> Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> </tr> </table>			Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐
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OTHER : _____		<table style="width:100%;"> <tr> <td style="width:50%;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> <td style="width:50%;"></td> </tr> </table>			Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
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SECTION A-A

NOTE:
ALSO SOLD WITH KIT RBW6305G01531-3G,
BOX TWO RBW6305G19731-3G.

REVISIONS			
REV	DESCRIPTION	DATE	INITIAL APPROVED
A	CH'D - 3 ENGRAVE NOTES PER R.W.	5/6/11	R/C RW
B	CH'D TOOL NAME WAS T/R DRIVE QUILL SEAL REMOVER IS TOOL. T/R DRIVE QUILL LIP SEAL INSTALLER TO MATCH PARTS MANUAL.	11/4/13	R/C RW
1	-1 CH'D DIMS WAS 3.400 IS 3.20. WAS (.27 X 45°) IS 27 X 45°. DELETED DIM. 1.48 CH'D SECTION A-A TO HALF SECTION TO DIM KNURL. CH'D TOLERANCE ON NON-CRITICAL PARTS.	5/14/14	DPD GE

ASSY QTY	BIO QTY	PART #	UNIT	DESCRIPTION	MATERIAL	BIO INFORMATION OR SPECIFICATIONS	Pg.
-1	1	HANDLE			6061	Ø3-3/4 x 7	1
-3	1	BASE			6061	Ø4-3/4 x 2-1/2	2

ASSY #									
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SCALE	1:2	DATE	2-7-11	SHEET	1 of 2
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XX ± .01	PROCESSED TO ANGLES ±.5°	FINISH	8-62	CLEAR ANODIZE
1	UNLESS OTHERWISE SPECIFIED			
	1. BREAK ALL SHARP EDGES			
	.015 x .45 PR .015 R			
	2 DIMENSIONAL LIMITS APPLY AFTER PLATING			
	USED ON MODEL			
	AW139			

HANDLE

-1

RED BARN MACHINE

TOOL, T/R DRIVE QUILL
LIP SEAL INSTALLER

DWG NO. RBW6305G15731-3G REV 1

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
X.XX ± .01
X.X ± .01
X ± .01
FRACTIONS ± 1/32
ANGLES ± .5°
UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES
0.15 X 45° PR 0.15 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

SCALE 1:2 DATE 2-7-11 SHEET 1 of 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						



Dart Aerospace Ltd.
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Canada

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PURCHASE ORDER **PO039084**

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
	RBW6500X01611-W142H-3T-1P			TBD As Per Dwg RBW6500X01611-W142H-3T-1 Rev. 1							
Line Item Note job# 172605											
8	RBW6500X01611-W142H-3T-3P			TBD As Per Dwg RBW6500X01611-W142H-3T-3 Rev. 1	Firmed	4/16/18	5 Ea	0 Ea	5 Ea	\$618.50/Ea	\$3,092.50
Line Item Note job# 172597											
9	RBW6500X01611-W142H-3T-5P			TBD As Per Dwg RBW6500X01611-W142H-3T-5 Rev. 1	Firmed	4/16/18	5 Ea	0 Ea	5 Ea	\$618.50/Ea	\$3,092.50
Line Item Note job# 172599											
10	RBW6522A00231-W142S-3TP			Tail Rotor Gear Box/Mast Output Oil Seal Assembly Support Tool As Per Dwg RBW6522A00231-W142S-3T Rev. 2	Firmed	4/16/18	5 Ea	0 Ea	5 Ea	\$195.79/Ea	\$978.95
Line Item Note job# 172612											
11	RBW6522A00231-W142AJ-3TP			Tail Rotor Gear Box/Servo Actuator Oil Seal Fit/Extracting Tool As Per Dwg RBW6522A00231-W142AJ-3T Rev. 5	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$2,061.26/Ea	\$6,183.78
Line Item Note job# 172609											
12	RBW6522A00231-W142AK-3TP			Tail Rotor Gear Box/Mast Output Oil Seal Assembly Press Tool As Per Dwg RBW6522A00231-W142AK-3T Rev. 1	Firmed	4/16/18	5 Ea	0 Ea	5 Ea	\$160.76/Ea	\$803.80
Line Item Note job# 172602											
13	RBW6305G16831-3GP			Fan Drive Quill Lip Seal Remover As Per Dwg RBW6305G16831-3G Rev. B	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$490.83/Ea	\$1,472.49
Line Item Note job# 172417											
14	RBW6305G15731-3GP			Tail Rotor Drive Quill Seal Installer As Per Dwg RBW6305G15731-	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$548.02/Ea	\$1,644.06



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PURCHASE ORDER **PO039084**

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
				3G Rev. 1							
Line Item Note job# 172416											
15	RBW6305G14631-3GP			Tail Rotor Drive Quill Seal Housing Remover As Per Dwg RBW6305G14631-3G Rev. 1A	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$1,205.32/Ea	\$3,615.96
							3x			AT 18/4/25	
Line Item Note job# 172415											
16	RBW6305G14831-3GP			Tail Rotor Drive Quill Lip Seal Remover As Per Dwg RBW6305G14831-3G Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$922.80/Ea	\$2,768.40
Line Item Note job# 172414											
17	RBW6305G16031-3GP			Drive Quill Seal Housing Remover As Per Dwg RBW6305G16031-3G Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$981.65/Ea	\$2,944.95
							3x			AT 18/4/26	
Line Item Note job# 172413											
18	RBW6305G18331-3GP			Ecs Drill Quill Lip Seal Remover As Per Dwg RBW6305G18331-3G Rev. B	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$534.40/Ea	\$1,603.20
							3x			AT 18/4/25	
Line Item Note job# 172412											
19	RBW6305G18631-3GP			Ecs Drive Quill Housing Remover As Per Dwg RBW6305G18631-3G Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$1,043.33/Ea	\$3,129.99
							3x			AT 18/4/26	
Line Item Note job# 172411											
20	RBW6305G19231-3GP			Puller Rotor Brake Adapter Flange Remover As Per Dwg RBW6305G19231-3G Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$740.19/Ea	\$2,220.57
							3x			AT 18/4/26	
Line Item Note job# 172410											
21	RBW6305G19151-3GP			Guide Fan Drive Quill Seal Housing Installer As Per Dwg RBW6305G19151-3G Rev. B	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$132.32/Ea	\$396.96
							3x			AT 18/4/16	
Line Item Note job# 172402											
22	RBW6305G16231-3G-1P			Handle As Per Dwg RBW6305G16231-3G-1 Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$368.38/Ea	\$1,105.14
							3x			AT 18/4/16	



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No:039084 Dated: 04/27/2018

Our Order / Job No: 18AWT Order Qty: 3

Part Name: Tool, T/R Drive Quill Lip Seal Installer

Part Number: RBW6305G15731-3G

Lot Size:N/A Ship Date: 04/27/2018

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number:RBW6305G15731-3G Rev: 1

Material Size and Type: -1/6061 ALUM; -3/6061 ALUM.

Material Specifications: ALUM: ASTM B221

Heat Treatment: N/A

Plating/Finish: CLEAR ANODIZE: MIL-A-8625F, TYPE II, CLASS I

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 04/27/18

Signed: 


MAY 03 2018

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com